CLAIM AMENDMENTS

Claim 1 (currently amended): A network management system for discovering information about a network, comprising:

a plurality of processing nodes;

plural discovery agents on said nodes adapted to discover information concerning said network;

each of said discovery agents having an associated discovery capability;

each of said discovery agents having an associated discovery assignment computed prior to discovery;

collectively, said agent discovery assignments being a subset of said agent discovery capabilities; ~~and~~

said agent discovery capabilities being overlapping due to some of said agents being capable of discovering the same information from the same network device, and said discovery assignments being non-overlapping, such that (1) no network device is discovered more than once by different discovery agents seeking the same information, (2) one or more agents are not permitted to perform full discovery of information due to one or more other discovery agents being assigned to discover the same information, and (3) no duplicate discovery information is generated; and

said system being configured to handle failover conditions wherein said discovery agents are no longer able to gather all information required by said discovery assignments, such that there is missing discovery information, said failover conditions being handled by consulting the discovery capabilities of other discovery agents to identify discovery agents that are capable of discovering said missing information.

Claim 2 (canceled).

Claim 3 (previously presented): A system in accordance with Claim 1 wherein said agent discovery assignments are based on said discovery capabilities of different discovery agents and a determination of which said discovery agents having overlapping discovery capabilities are most fit to receive said agent discovery assignments.

Claim 4 (previously presented): A system in accordance with Claim 1 wherein said agent discovery assignments reflect one or more of data collection service registrations in which a network manager in said system registers with said plural discovery agents to receive specified discovery information, agent cost to obtain network information, load balancing among said plural discovery agents, and assignment churn.

Claim 5 (previously presented): A system in accordance with Claim 1 wherein said agent discovery assignments comprise both inband and outband discovery assignments.

Claims 6-20 (canceled).

Claim 21 (previously presented): A system in accordance with Claim 1 wherein said agent discovery assignments for one or more of said discovery agents are a subset of said discovery capabilities of said one or more discovery agents.

Claim 22 (previously presented): A system in accordance with Claim 1 wherein one or more of said discovery agents are capable of discovering said information from said network device but are given no discovery assignment at all.

Claim 23 (previously presented): A system in accordance with Claim 1 wherein said agent discovery assignments are based on said discovery capabilities being processed by a network manager and each discovery agent's discovery assignment being stored at said discovery agent for subsequent reference.

Claim 24 (previously presented): A system in accordance with Claim 1 wherein said agent discovery assignments are based on an input listing of said discovery agents, the network devices they are capable of discovering and a cost to discover each network device, and an output listing of said discovery agents and the network devices said discovery agents are assigned to discover.

Claim 25 (previously presented): A system in accordance with Claim 24, wherein said agent discovery assignments are further based on an entity-sorting computation that produces an entity-sorting listing that associates each network device and one or more discovery agents each having a cost to discover that network device, said listing ordering said network devices according to the discovery costs of the associated discovery agents.

Claim 26 (previously presented): A system in accordance with Claim 25, wherein said agent discovery assignments are further based on an agent-sorting computation that produces an

agent-sorting listing that modifies said entity-sorting listing to order the discovery agents associated with each network device according to one or more of agent cost, load factor and agent identifier.

Claim 27 (previously presented): A system in accordance with Claim 1 wherein said discovery agents are configured to conduct agent capability queries in response to capability polls requested by a network manager.

Claim 28 (previously presented): A system in accordance with Claim 27 wherein said agent capability queries seek a minimal subset of information required to effect calculation of said agent discovery assignments.

Claim 29 (previously presented): A system in accordance with claim 27 wherein each of said discovery agents is configured to implement a full discovery query that returns a complete information hierarchy identifying all levels of discoverable entities in a path from said agent to all network endpoints reachable by that agent, and to further implement said agent capability query that gathers a subset of said complete information hierarchy for use in computing said agent assignments.

Claim 30 (previously presented): A system in accordance with Claim 27 wherein said agents are configured to conduct said agent capability queries based on said capability polls being issued in response to one or more of (1) a network event being detected, (2) an agent's discovery capabilities having changed, (3) and an agent being added, removed or modified.

Claim 31 (cancelled).

Claim 32 (new): A network management system for discovering information about a network, comprising:

a plurality of processing nodes;

plural discovery agents on said nodes adapted to discover information concerning said network;

each of said discovery agents having an associated discovery capability;

each of said discovery agents having an associated discovery assignment computed prior to discovery;

collectively, said agent discovery assignments being a subset of said agent discovery capabilities;

said agent discovery capabilities being overlapping due to some of said agents being capable of discovering the same information from the same network device, and said discovery assignments being non-overlapping, such that (1) no network device is discovered more than once by different discovery agents seeking the same information, (2) one or more agents are not permitted to perform full discovery of information due to one or more other discovery agents being assigned to discover the same information, and (3) no duplicate discovery information is generated;

said agent discovery assignments being based on an input listing of said discovery agents, the network devices they are capable of discovering and a cost to discover each network device, and an output listing of said discovery agents and the network devices said discovery agents are assigned to discover; and

said agent discovery assignments being further based on an entity-sorting computation that produces an entity-sorting listing that associates each network device and one or more discovery agents each having a cost to discover that network device, said listing ordering said network devices according to the discovery costs of the associated discovery agents.

Claim 33 (new): A system in accordance with Claim 32, wherein said agent discovery assignments are further based on an agent-sorting computation that produces an agent-sorting listing that modifies said entity-sorting listing to order the discovery agents associated with each network device according to one or more of agent cost, load factor and agent identifier.